System Communications

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The official link for this solicitation is:
http://www.acq.osd.mil/osbp/sbir/solicitations/sbir20152/index.shtml

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Department of Defense

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Description:

As new missile defense CONOPS are developed, the requirements placed on weapon data links will increase. Lower latencies and higher data rates will be needed as weapons become more agile, targeting error requirements become tighter, and the need for real time data become greater. In order to support future network communications, innovative concepts and technologies are needed to develop mitigation strategies and alternative approaches to lower link latency issues without the need for hardware modification. The more stressing environments of future systems including engagement coordination scenarios and stress communications networks require future networks to account for improvements in: • Lower Latency • Increased Bandwidth • Increased Data Rates • Transmission Accuracy Coordination algorithms that take advantage of alternate satellite and non-satellite based communication can be considered. Also, considerations should be made for latency and alternatives in case of link failure. PHASE I: Develop a proof of concept design/study; identify designs/models, and conduct a feasibility assessment for the proposed algorithm, model, technique, and/or methods. Work should clearly validate the viability of the proposed solution with a clear concept of operation document. PHASE II: Based on the results and findings of Phase I, develop and refine the proposed solution. The objective is to validate the new technology solution that a customer can transition in Phase III. Validate the feasibility of the Phase I concept by development and demonstrations that will be tested to ensure performance objectives are met. Validation would include, but not be limited to, system simulations, operation in test-beds, or operation in a demonstration subsystem. This phase should result in a prototype with substantial commercialization

potential. PHASE III: Apply the innovations demonstrated in the first two phases to one or more missile defense applications. The objective of Phase III is to demonstrate the scalability of the developed technology, transition the component technology to a system integrator or payload contractor, mature it for operational insertion, and demonstrate the technology in an operational level environment. Commercialization: The contractor will pursue commercialization of the various technologies and models developed in Phase II for potential commercial uses in such diverse fields as network, cell, and financial communications, and other industries.